

Notice of Allowability

Application No.

09/990,880

Examiner

Courtney Thomas

Applicant(s)

KARELLAS ET AL.

Art Unit

2882

-- Th MAILING DATE of this communication appears on th cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/27/2003.
2. ☒ The allowed claim(s) is/are 1-45.
3. ☒ The drawings filed on 21 June 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- * Certified copies not received: _____.
5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 - (a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No. _____.
 - (b) ☐ including changes required by the proposed drawing correction filed _____, which has been approved by the Examiner.
 - (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the margin according to 37 CFR 1.121(d).

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1 <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5 <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2 <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6 <input type="checkbox"/> Interview Summary (PTO-413), Paper No. _____. |
| 3 <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No. <u>10/27/2003</u> | 7 <input type="checkbox"/> Examiner's Amendment/Comment |
| 4 <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8 <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9 <input type="checkbox"/> Other |

DETAILED ACTION

Allowable Subject Matter

1. Claims 1-45 are allowed.
2. The following is an examiner's statement of reasons for allowance:
3. **As per claims 1 and 17 and dependent claims 2-16 and 18**, the examiner found no reference in the prior art that disclosed or made obvious an apparatus comprising a controller, electrically connected to an imaging sensor, the controller actuating read-out of the electronic representation from the imaging sensor to provide an image frame including a first region having a first resolution and including a second region having a second resolution that is higher than the first resolution as recited in independent claims 1 and 17.
4. **As per claim 19 and dependent claims 20-29**, the examiner found no reference in the prior art that disclosed or made obvious a method comprising the step of binning charge from separate pixel elements of sensors for read-out with an electronic controller and forming a three-dimensional image of cardiac tissue from the binned representation as recited in independent claim 19.
5. **As per claim 30 and dependent claims 31-45**, the examiner found no reference in the prior art that disclosed or made obvious an apparatus comprising a controller electrically connected to an imaging sensor, the controller actuating read-out of a multi-resolution mode electronic representation from the imaging sensor as recited in independent claim 30.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

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fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: U.S. Patents **5,150,394**; **5,465,284**, and **6,031,892** to Karellas et al. The disclosed systems and methods incorporate an X-ray source, scintillator, optical coupler, binning sensor and CCD controller to affect the imaging of the internal structures of a patient.

7.

Another object of the invention is to provide an X-ray diagnostic apparatus using a large vision field, high resolution X-ray flat panel detector, capable of carrying out image processing flexibly by changing resolution corresponding to the size of an observation region relative to the X-ray flat panel detector.


Column 4, lines 56-61 - U.S. Patent 6,222,906 to Sakaguchi et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Courtney Thomas whose telephone number is (571) 272-2496. The examiner can normally be reached on M - F (9 am - 5 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on (571) 272 2490. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1550.

CT
Courtney Thomas


EDWARD J. GLICK
SUPERVISOR, PATENT EXAMINER